



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,119	05/31/2006	Giovanni Beretta	1029.1036	2318
20311	7590	03/19/2007	EXAMINER	
LUCAS & MERCANTI, LLP 475 PARK AVENUE SOUTH 15TH FLOOR NEW YORK, NY 10016			KELLEHER, WILLIAM J	
			ART UNIT	PAPER NUMBER
			3673	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		03/19/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)
	10/596,119	BERETTA, GIOVANNI
	Examiner	Art Unit
	Bill Kelleher	3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 31 May 2006.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-15 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 May 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 5/31/06.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
- 6) Other: _____.

DETAILED ACTION

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "... characterized in that the pressure sensors measure the pressure in air chambers of one group differing from the air chambers of the same group connected to the inlets." It is unclear to the examiner how pressure in air chambers of one group can be measured differing from air chambers of the same group. In view of the specification describing maintaining pressure within groups and in view of Figure 2 showing one pressure sensor for each group, the Examiner will interpret this as "... characterized in that the pressure sensors measure the pressure in air chambers of one group differing from the air chambers of a different group connected to the inlets."

Claim 4 recites that the pressure sensors are arranged on the side opposite to the inlets and/or outlets. It is unclear to the Examiner what the pressure sensors and the inlets and/or outlets are on opposite sides of. For the purposes of compact prosecution, the Examiner will interpret any two separate components as being on opposite sides of whatever separates them.

Claim Rejections - 35 USC § 103

2. Claims 1-4, 7, and 13-15 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Oexman (U.S. Patent 5,848,450).

Regarding Claim 1, Oexman discloses a mattress comprising air inlets (Oexman discloses in Column 4, Lines 32-37 that "The control 30 includes a controller module 31, which contains pneumatic components including an air pump or compressor 32 that has an air inlet 33 communicating with atmosphere and an outlet 34 that connects through a respective one of four normally closed solenoid inflation valves 35a-38a to respective **inlets** of the air mattress zones 25-28.), an electric compressor (32), electric valves (35a-38a), a control unit (31), an automatic switch (44), one or more pressure sensors (55-58), an external cover (Figure 2A shows the shape of Oexman's air chambers while Figure 2 shows these chambers surrounded by a cover. Alternatively, the Examiner takes Official Notice that it is well known to put a mattress core inside an external cover such as a sheet.), in which a padding (combination of all of Oexman's air chambers) including air chambers (shown in Figure 2A) suitable for being inflated for supporting the body of at least one user is arranged wherein the air chambers are connected by means of the air inlets to an electric compressor (32) for sucking air from the outside (33) and pump it into the chambers, said inlets being provided with electric valves (35a-38a) connected to the control unit (31) which is in turn connected to the automatic switch (44) arranged along an electric line between the compressor (32) and an electric power source (43) wherein the control unit (31) opens or closes electric valves and the

automatic switch according to control signals coming from the pressure sensors (Oexman discloses in Column 4, Line 66 that "The microprocessor 50 controls the valves 35a-38a and 35b-38b and the pump actuation switch 44 in response signals from the user interface control 40, from a deflate switch 51 on the module 31, from an auxiliary input 52 that connects either to the bed control 15 or sensor switches 53 and 54 on the head and foot sections of the bed 11, and from a set of four pressure sensors 55-58, which generate analog signals in response to measurements of the pressures on lines between the ports 45-48 and the valves 35a-38a and 35b-38b.) wherein the air chambers are grouped into one or more groups (25-28) of mutually connected air chambers characterized in that the pressure sensors measure the pressure in air chambers of one group (25-28) differing from the air chambers of a different group connected to the inlets. Oexman shows each pressure zone (25-28) having its own pressure sensor (55-58).

Regarding Claims 2 and 3, Oexman discloses the mattress of Claim 1, characterized in that the groups of air chambers are connected to the outside through outlets provided with electric valves connected to the control unit. Oexman discloses in Column 4, Lines 41-45 that "The pneumatic components also include a bank of four normally closed solenoid deflation valves 35b-38b that are connected in respective outlets from each of the respective zones 25-28 which vent to atmosphere." Oexman further discloses that "...respective one of four normally closed solenoid inflation valves 35a-38a" in Column 4, Line 36.

Regarding Claim 4, Oexman does not disclose locations of the pressure sensors or the inlets and outlets. However, because these are separate components, they are considered to be on opposite sides of whatever separates them.

Regarding Claim 7, Oexman discloses a mattress with air chambers grouped into four groups (25-28) mutually connected in each group. These groups correspond to the head zone (25), a lumbar zone (26), a sacral zone (27) and a leg zone (28) of the user (depending on which way the user uses the mattress). Oexman's leg zone (28) has a depth greater than other zones (26 and 27) as shown in Figure 2.

Regarding Claim 13, Oexman discloses a control unit (31) provided and connected with at least one digital memory (60) suitable for storing the pressure values in one or more air chambers.

Regarding Claim 14, Oexman discloses "The first step of the program that is loaded from the EEPROM 60 is to check to determine if user defined pressure SETTINGS have been entered and retained in memory in the EEPROM 60 for each of the four zones 25-28 of the mattress 20. If such user defined SETTINGS have not been entered and retained, factory or installer set default data is used, which might be generic data for all users or data for a particular class of users, such as users in a particular weight range." Therefore, Oexman's digital memory (60) comprises a series of pressure values which can be selected by the control unit according to the user's weight.

Regarding Claim 15, Oexman's control unit (31) can communicate with an external remote control (40) for modifying the pressure in the air chambers.

Art Unit: 3673

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oexman in view of Higgs (U.S. Patent 5,249,319). Oexman discloses the mattress of Claim 1, but does not disclose the padding having a substantially parallelepiped shape with four sides and a base made of polyurethane foam. Higgs, however, discloses an air mattress enclosed in a foam padding (Column 2, Lines 46-49) with a substantially parallelepiped shape with four side walls and a base (20) made of polyurethane foam (Column 3, Lines 11-12). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use a padding such as Higgs' to surround the air chambers of Oexman. The motivation would have been to protect the air chambers from damage.

4. Claims 6, 8, 9, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oexman in view of Graebe (U.S. Patent 5,596,781).

Regarding Claim 6, Oexman discloses the mattress of Claim 1, but does not disclose the air chambers being in rows and columns. Graebe, however, discloses a grid of air chambers (See Figure 2 of Graebe) which form rows and columns. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to replace Oexman's air chambers with Graebe's. The motivation would have been to maximize user comfort. The combination of Graebe's bladders is considered the padding. Therefore the air chambers had a substantially parallelepiped shape and are arranged in the padding between its side walls (outer side wall of combination of air chambers) and above its base (base of combination of air chambers) and forms horizontal rows and columns.

Regarding Claim 8, Graebe's air chambers (See Figures 8 and 9) are obtained by an upper sheet (14), of deformable material, which is shaped so as to form a plurality of alveoli with a substantially parallelepiped shape which are open downwards and are mutually connected by stripes (material that surrounds each cell) of the same material along their lower edges, a lower sheet (13) of a deformable material being welded along said stripes (welding of 13a to 14a at 15a) so as to hermetically close the alveoli and obtain air chambers.

Regarding Claim 9, Graebe's air chambers communicate with one or more adjacent chambers through a slit (16) made between the upper and lower sheets by preventing the welding between the sheets along a portion of the stripe which joins the lower edges of the alveoli.

Regarding Claim 11, The air chambers are considered to be the volume occupied between sheets 13 and 14 of Graebe. Therefore, sheet 13 is considered to be a flexible net arranged on the air chambers.

Regarding Claim 12, The upper sheet of Graebe's air chambers is a deformable material suitable for keeping the deformed shape for a determinate period.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oexman in view of Everard (U.S. Patent 5,142,717). Oexman discloses the mattress of Claim 1, but does not disclose reinforcing members which had a complementary shape and smaller size than the air chambers that are made of a deformable material and arranged in the air chambers. Everard (See Figure 2a), however, discloses air chambers with reinforcing members with a complementary shape and a smaller size and are made of

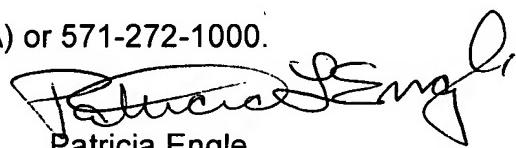
deformable material (open cell foam) and are arranged in the air chambers. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use air bladder reinforcements such as Everard's in Oexman's air bladders. The motivation would have been "to support a sufficient amount of the weight of a person to allow the pressure within the mattress to be reduced."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bill Kelleher whose telephone number is (571)-272-7753. The examiner can normally be reached on Monday - Friday 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Engle can be reached on (571)-272-6660. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Patricia Engle
Supervisory Patent Examiner
Art Unit 3673

BK



3/15/07